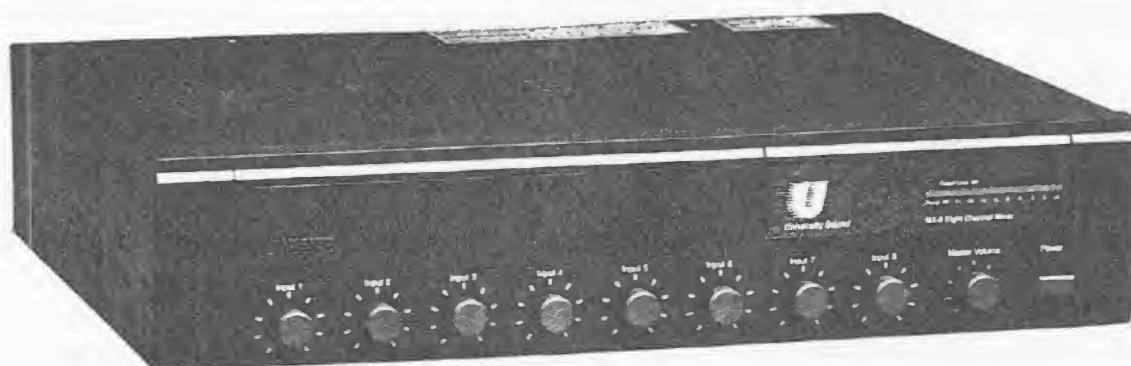


# Model MX-8

Eight-Channel Mixer

**UNIFIED  
ELECTRONICS**



## Product Data

- Eight transformer balanced channels with individual level controls
- Three outputs: 600 ohm transformer-coupled line, Tape, and Aux.
- Individual rear-panel gain, low cut, and high cut controls on each input
- 3-screw terminal input connectors are changeable to RCA or XLR input connectors
- Phantom power and muting status individually selectable for each input
- Automatic or manual muting
- Transformer-coupled Bridge in/out
- 120 VAC or 24 VDC operation
- Unified Line expandability

## Specifications:

Power Output	+4 dBm rated output
Power Bandwidth	30 Hz - 20 kHz $\pm 1$ dB
Frequency Response	<0.5 %THD @ rated output
Distortion	20 Hz -20,000 Hz $\pm 1$ dB
Equivalent Input Noise	<0.3% THD
Signal to Noise Ratio	127dBu
	>75 dB master vol max
	>90 dB master vol min
Inputs	8 transformer balanced
	Mic to line levels on each
Input Sensitivity	Continuously variable
	Mic: .7 mV @ 200 $\Omega$
	Line: 100mV @ 10 K $\Omega$
Low Cut (each Input)	$\leq -10$ dB @ 100 Hz (6 dB/oct)
High Cut (each Input)	$\leq -10$ dB @ 10 kHz (6 dB/oct)
Outputs	Main output (transformer coupled) 150 $\Omega$ impedance
	Tape: 2.0 K $\Omega$ impedance
	Aux: 2.0 K $\Omega$ impedance
Bridge In/Out	Transformer balanced
	2.2 K $\Omega$ impedance
Circuit Protection	AC line fuse
Power Supply	120 VAC 60 Hz or
	24 VDC 350 mA
Dimensions	
Height	4.0" (10.1 cm)
Width	16.5" (41.9 cm)
Depth	16.0" (40.6 cm)
Net Weight	11 lbs. (5 kg)
Shipping Weight	15 lbs. (6.8 kg)

## Description

The MX-8 MixerDock™ is an eight-channel monaural mixer in a rack or shelf-mountable enclosure. This mainframe unit is fully compatible with all of the Unified Line Accessory Cards, but unlike other "modular" mixers and amplifiers presently on the market, it is fully functional as supplied.

The front panel features consist of: eight level controls (one for each of the eight channels), a master level control, a bar-graph output level LED display, a POWER LED, and a power on/off switch.

Each of the MX-8's eight inputs is transformer balanced and can accept mic, line, or auxiliary level inputs. Eight input gain controls on the rear panel allow individual adjustment to match different input levels. An optional 43dB pad can be installed in each channel to accept input levels of up to 15 VDC. Low-cut and high-cut filters on each input adjust the channel equalization. The 3-screw terminal input connector can be replaced with XLR or RCA connectors without resoldering connections.

Muting can be automatically or manually activated by a contact closure across two screw terminals on the rear of the unit. The automatic activation circuit has a sensitivity control to set the signal level at which muting is triggered. Mute attenuation is adjustable. Rear-panel DIP switches give the user complete control over which inputs will mute or unmute other inputs. The MX-8's sophisticated muting circuitry provides flexibility not usually associated with traditional mixer/amplifiers. Each channel can be set to one of four different muting states: Priority, Slave, Inverted, or Inverted Priority. A Priority channel is always unmuted. A Slave channel will be muted when a signal is detected on a Priority channel. Inverted channels are normally

muted, and are unmuted by a Priority channel. A channel set to Inverted Priority is normally muted, and is unmuted when a signal is detected on its own input or any other input set to Priority or Inverted Priority. A channel set to Off is completely unaffected by the muting circuitry. Triggering the muting circuitry manually will affect each of these channel settings in the same way.

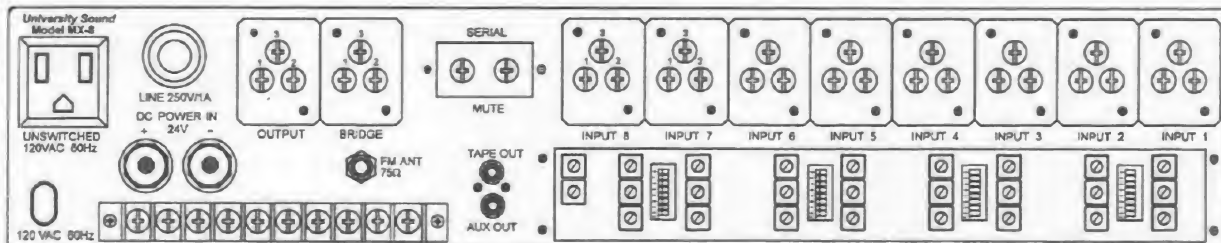
Each input of the MX-8 is capable of providing 24 VDC phantom power for use with electret-type microphones. Unlike other mixers that link all inputs to the same phantom power switch, each input's phantom power status on the MX-8 can be set separately. This way, electret mics can be used alongside other input devices that might otherwise be damaged by phantom power.

Three mixer outputs provide direct connection to most power amplifier inputs. The MAIN output is a balanced 600 ohm transformer coupled line level output via a 3-screw terminal connector. The remaining two outputs consist of high-impedance TAPE and AUX outputs, provided on RCA connectors. The TAPE output is pre-master level in the mixer circuit, and is unaffected by this control. The MAIN and AUX outputs are post-master level control.

The BRIDGE connection is a transformer coupled 3-screw terminal connector that can be used as an input or an output. This pre-master level connection allows multiple units to be connected in parallel.

The MX-8 can be powered by conventional 120 VAC 60 Hz lines, or from a 24 VDC source plugged into the battery terminals on the rear of the unit. Circuit protection is provided by a conventional AC line 1 Amp fuse.

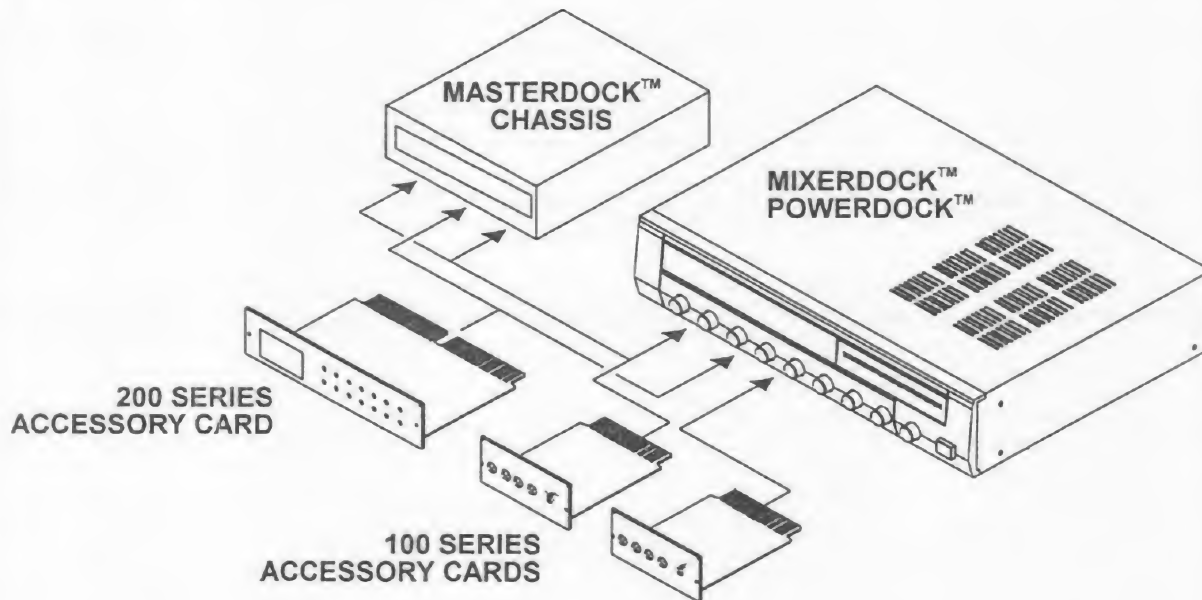
## Rear-panel View



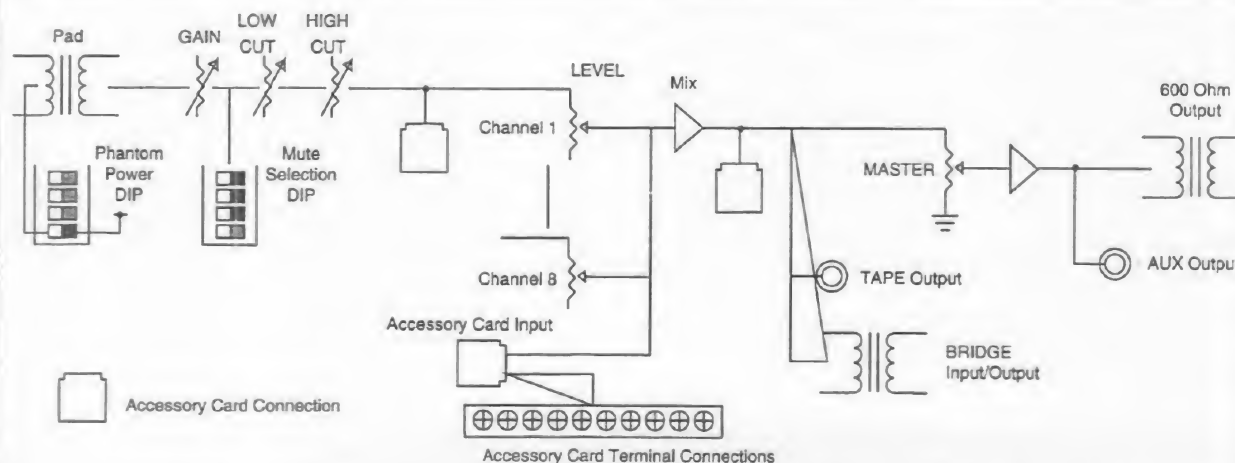
## Unified Features

As part of University Sound's Unified Electronics™ Line, the MX-8 MixerDock™ mixer is fully compatible with all of the accessory cards in the Unified Line. This feature allows the MX-8 to be adapted to many different installations conveniently and effectively. All of the Unified accessories come on circuit cards that can be plugged into the accessory slot on the front panel of the MX-8.

Any necessary external connections to installed cards are made on screw terminals on the rear panel of the MX-8, preventing tampering and preserving the cosmetic appearance of the unit. For more information on other products in the Unified Line, contact your University Sound dealer or University Sound directly at the address on the back of this sheet.



## Block Diagram





## Architect's, Engineer's, and Consultant's Specifications

The mixer shall be an eight-input monaural solid state mixer. The unit shall be compatible with all University Sound Unified Electronics™ Accessory Cards, but shall also be fully functional as supplied. The unit's accessory expansion slot shall open from the front panel, and include a protective cover.

Each of the unit's eight inputs shall be transformer balanced, and be capable of independently matching microphone, line, or auxiliary input levels via rear-panel gain controls on each channel. There shall be a level control for every input on the front panel that will vary from full attenuation to the gain set by the rear panel gain control for that input, as well as a master volume control that shall vary from full attenuation to no attenuation. Each input shall have independent high-cut and low-cut filters to provide up to -10 dB of cut at 10 kHz and 100 Hz respectively, the controls for which shall be located on the rear panel. The input connectors shall be 3-screw terminal connectors, any of which can be changed to standard XLR or RCA phono jacks.

The MX-8 shall be capable of both signal-activated and manually-activated muting. Manually-activated muting shall be triggered by contact closure across two rear panel screw terminals. There shall be five distinct muting states assignable to any of the eight inputs: Priority, Slave, Inverted, Inverted Priority, and Off. Priority and Slave shall act in the conventional manner; a Slave channel shall be normally unmuted, and shall be muted while a signal is detected on any channel set to a Priority muting status or a connection is closed across the manual mute terminals. A Priority channel will always be unmuted. Inverted channels will be normally muted, but will be unmuted by a Priority channel or manual mute. A channel in the Inverted Priority status shall operate just as a Priority channel does, except that it is normally muted, and is unmuted by a signal detected on its own input or any other channels set to Priority or Inverted Priority status. A channel set to the Off state will neither mute other channels nor be muted by other channels. Each of the eight inputs shall be independently assignable to any of the five mute states. There shall be a control to set the threshold level for the signal-activation circuit, and a control to set the level of

attenuation of muted channels. Accessory cards installed in the MX-8 shall have access to the muting circuitry and shall respond to a mute activation according to the circuitry contained on that particular card.

The unit shall have three different mixer outputs: a 600 Ohm balanced output, a TAPE output, and an AUX output. The 600 Ohm output shall be a transformer coupled line level output on a 3-screw terminal connector. The TAPE output shall appear pre-master volume, but is at a unbalanced line level. This output shall use a standard RCA phono jack. The AUX output will be placed after the master volume control, and use a standard RCA phono jack.

The BRIDGE input/output shall be transformer isolated and shall use a 3-screw terminal connector, and will be placed in the circuit prior to the master volume control. It shall act as a line-level access point, allowing a signal to be inserted before the master volume control, or a monitor of the mix unaffected by the master volume taken as an output.

For access to installed accessory cards, there shall be a barrier strip of ten screw terminals on the rear panel of the unit. Any necessary external connections to installed cards shall be made on this terminal strip.

The front panel features of the MX-8 shall consist of the eight input level controls, the master volume control, a bar-graph output level LED, a POWER LED, and a power ON/OFF switch. The front panel shall be constructed of black injection molded high-impact plastic, while the rest of the enclosure shall be of a black painted sheet steel. The enclosure shall measure 16.5" x 16.0" x 4.0" (41.9 cm x 40.6 cm x 10.1 cm), and weigh 11 lbs. (5 kg).

The unit shall be powered from a standard 120 VAC 60 Hz grounded power source, or from a 24 VDC 350 mA source plugged into the DC POWER IN banana-connector terminals on the rear of the unit. There shall be an unswitched three prong AC receptacle on the rear of the unit. The Model MX-8 MixerDock™ has been specified.

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